FARM INDEX

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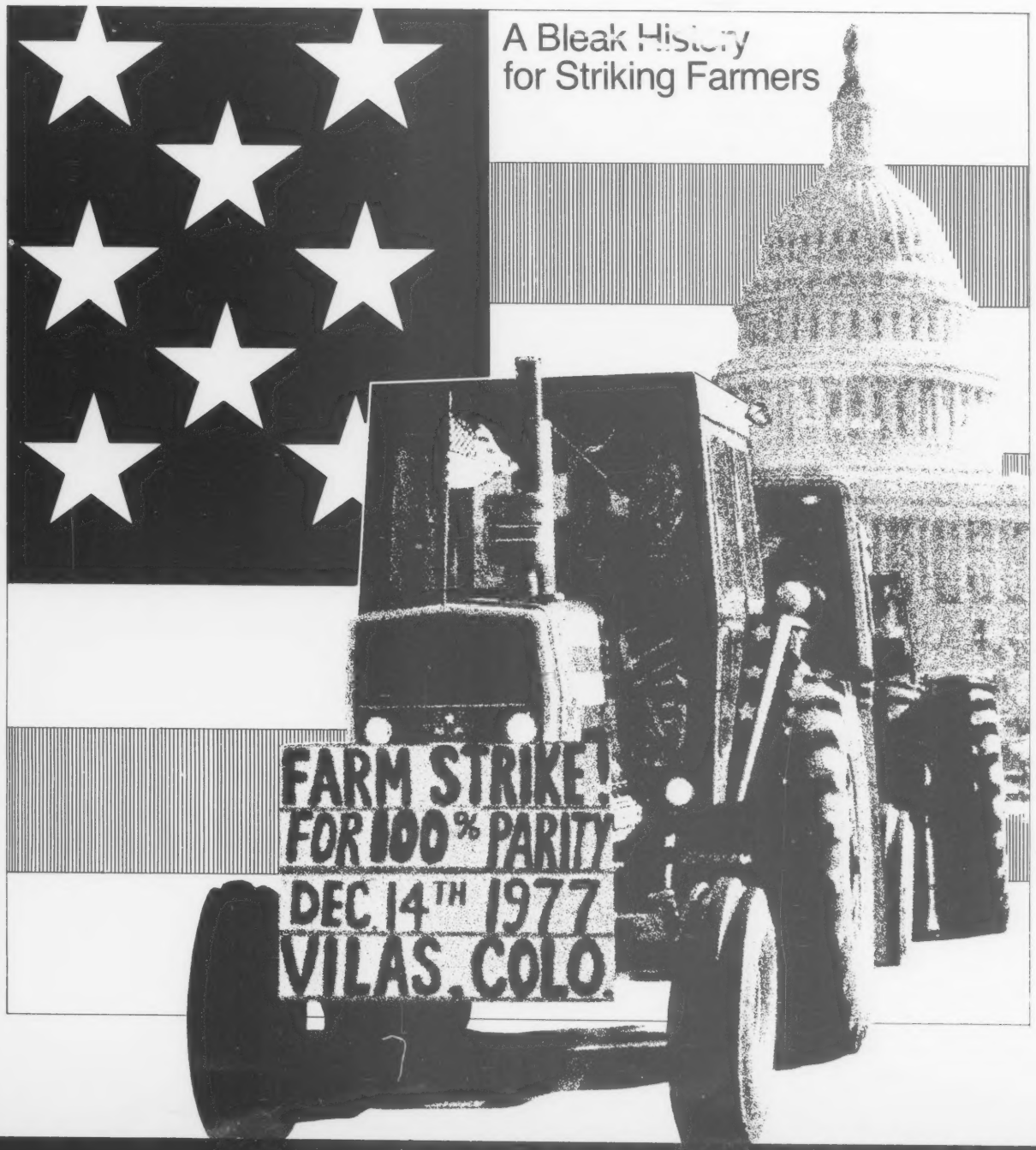

Outlook

Editor's Note

This is the last issue in which Farm Index will refer to the agency as ERS, since the new Economics, Statistics, and Cooperative Service (ESCS) is now in operation. Material included in this issue was prepared before reorganization.

Our agency rings in the new year with a new title. On January 1, the Economic Research Service (ERS) was merged with the Statistical Reporting Service and the Farmer Cooperative Service. From now on, we go by the name of the Economics, Statistics, and Cooperatives Service (ESCS).

Blessed event. Also, a new baby has arrived in our home. We've named it "Commodity Outlook for Farmers," a series of newsletters designed to bring farmers timely information for making production and marketing decisions.

The letters carry five titles: wheat, feed, livestock, oilseeds, and cotton. There's also a sixth letter on the outlook for agriculture in general, to be sent to all subscribers. "Commodity Outlook for Farmers" goes out free to farmers, as authorized by Congress, but only on request.

Getting on the mailing list. USDA's Agricultural Conservation and Stabilization Service (ASCS) is sending some 4 million leaflets to individual farmers and local ASCS offices explaining the 1978 set-aside program. In that leaflet is information on how to get on the mailing list for all our commodity newsletters.

We'd prefer you enter your subscription via the ASCS leaflet—it makes things easier for the computer—but if you can't visit an ASCS office, write ESCS Publications, Room 0054, South Building, U.S. Department of Agriculture, Wash., D.C. 20250. Be sure to specify which newsletter(s) you want.

Here's a sample of the kind of info you'll be getting (from the December feed-livestock letter):

Plan Your Marketing Strategy. Take a close look at your marketing alternatives, keeping in mind that the likelihood is still for increased feed grain stocks despite recent optimism on the demand side.

Should you sell or store? You have several alternatives, depending on your storage setup, your cash situation, and your expectations of future prices.

- If you do not need cash now and you think grain prices will rise, store and pick a selling date later.
- If you do need cash now, but expect that higher prices later on will cover storage and interest charges, put your grain under nonrecourse Government loans. The average loan rate for corn is $2.00 per bushel; $1.90 for sorghum; $1.63 for barley; and $1.03 for oats. The maturity of 1977 loans has been reduced from 11 to 9 months after placement.

Now consider these possibilities on selling:

- Sell for cash now. Okay if you need the money right away. Otherwise, you might do better by putting your crop under loan, even after allowing for interest and storage costs.
- Contract for deferred pricing if you expect prices to move up later on.
- Sell grain for cash now and buy futures, especially if you don't have storage space but expect prices to rise later.

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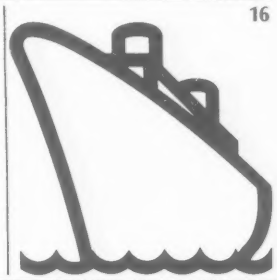

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Food Economics: Perspective on 1978

Editor's Note: The annual Food and Agricultural Outlook Conference, "Outlook '78," held at USDA in Washington November 14-17, focused on the economics of agriculture, the food and financial outlook, and world trade. Here are excerpts of two of the speeches presented.

AT HOME

Food price rises in 1978 of 4-6 percent are expected, according to ERS Acting Administrator Kenneth R. Farrell.

But that little spurt isn't all bad. It could be slightly less than 1977's 6-percent rise, and a good deal less than the large year-to-year jumps earlier this decade. In 1973, for example, grocery store food prices leaped over 16 percent, and the next year they shot up nearly 15 percent. The rate of increase moderated in 1976, however, with an average rise of only 2 percent.

In 1977, imported foods and fish were the major contributors to higher retail prices. But in 1978, higher marketing costs will probably lead the list.

In fact, labor costs in marketing domestically produced farm foods will exceed the farm value of those foods for the second year in a row in 1978. These costs have been going up steadily while the farm value of food hasn't moved in the past few years.

Values don't change. In 1978, the farm value of food will probably stay at about $56 billion for the fifth consecutive year. Farmers have been getting little, if any, benefit from higher food prices in recent years.

The stability of the farm value of foods is indicated by prospects for large supplies of most farm products, which will keep farm prices low. U.S. grain sales abroad should help strengthen farm prices a little, but they'll have little effect on retail food prices since stocks of grain on hand are large.

Consumer demand for food will probably not increase much in 1978. It may strengthen some as personal incomes rise about 9 percent, about the same as in 1977. Population increases will probably be small and will add only a little to demand for food and other farm products.

Force of habit. Consumer demand and buying habits are major forces in setting retail prices. People are eating more food away from home, with prices up 8 percent in 1977—reflecting higher operating costs as well as stronger consumer demand—while at home, food prices were up 6 percent.

Marketing costs in 1978 are the most pressing of the food price determinants. Besides a strengthening of consumer demand for extra services, such as more convenience foods, check cashing, and 24-hour store operation, wages of many food industry workers will be rising 7-8 percent and major labor collective bargaining agreements, covering a quarter million food marketing workers, are due to expire.

Somewhat offsetting the boosts in labor costs will be increased labor productivity. It should rise a little, continuing a slight upward trend, because of an expected heavier volume of food marketed.

Moving costs. Transportation costs have an important niche in the marketing costs picture. Transporting food will cost perhaps 8 percent more in 1978. The price of transportation is affected sharply by energy and labor costs.

Also in the food price mix, but to a lesser extent, production costs to the

farmer will rise again in 1978, mainly from greater labor costs and higher farmers' prices for inputs such as energy, fertilizers, and pesticides.

More uncertainty than usual surrounds energy questions as 1978 unfolds. International oil prices and political developments are joined by energy legislation on the worry list. For the time being, it appears quantities of inputs should be adequate, but it's almost definite that price increases—especially for oil and natural gas and their products—will continue.

Natural gas prices may swell if proposed changes in regulations are enacted; electric rates might climb because of the costs of converting from oil or natural gas for fuel to coal; and higher costs for all forms of energy will probably add their upward pressure to electric rates.

Watching the lawmaking. Food producers also have to keep an eye on legislation affecting farm products. It's not clear yet what the response will be to the 1977 farm law, or to international trade developments. There's little doubt, though, that some impact on U.S. food prices will occur. The recently adopted sugar program, for example, could increase the consumer price index for food by about 0.5 percent. (In accordance with the new farm law, the Commodity Credit Corporation wil offer sugar processors, under the loan program, 13.5 cents a pound for raw can sugar, and 14.24 cents for refined beet sugar.)

In brief, then, 1978 will see rising food prices for consumers, resulting mostly from higher marketing costs.

[Based on a speech by Kenneth R. Farrell, Acting Administrator, Economic Research Service.]

THE WORLD

Farming here and farming around the world: There's always been a kinship, but the links are stronger now than ever.

From the dramatic advances in world agricultural trade in the early 1970's to the continuing bustle of the world markets, farmers, economists, consumers, and business people are acutely aware of the ties that bind American farming to production around the globe.

Global supplies of food and other farm products have continued abundant for the second consecutive year. Big supplies of grains and increased crops of oilseeds, sugar crops, coffee, and cotton have resulted in sharp declines in world prices for these crops in the past year.

Food supply is still growing. Larger food supplies are virtually assured for most areas of the world, despite the recently announced sharp drop in the 1977 Soviet grain crop estimate, and some recent slipping in crop prospects in Canada and Australia. However, some food shortages could still show up in parts of Southeast Asia, Africa's Western Sahel, Afghanistan, and Ethiopia.

Large world supplies of grains, oilseeds, and meals have put a damper on prices and slashed returns to farmers. Still, people in many parts of the world suffer inadequate diets because of limited food supplies and prices that potential buyers can't afford.

Affecting this already complicated supply-demand equation are domestic and international policies on trade, trade barriers, food reserves, efforts to expand economic activity in individual countries, and other factors.

World economy slow. Such programs have enormous effects on the situation and outlook for general economic activity and agriculture. A sluggish world economy—general economic growth of 4 to 4½ percent in the developed nations in 1977—has combined with large world agricultural production for many products to depress U.S. farm incomes.

Even with recently boosted foreign sales of U.S. grains because of production lower than expected in several countries, net farm income for 1977 will probably remain near $20 billion. In constant dollars, this could be one of the lowest levels of net income since the depression years.

Trying to estimate farm incomes in 1978 is extremely hazardous this early in the game. Crop prices should increase seasonally in the first half of 1978, but large carryover stocks of most farm products will probably hold increases down.

Investors wary of inflation. Much, of course, depends on foreign trade. Some help for the world economy, and in turn for U.S. farmers, could come from efforts in developed nations to stimulate economic activity. Programs along these lines could lead to boosted consumer demand and capital investment. But they might also increase risks of inflation, and investors are wary of this danger.

[Based on a speech by J. Dawson Ahalt, Acting Chairman of the World Food and Agricultural Outlook and Situation Board, USDA.]

Farm Financial Ledger: Mixed Returns for 1977

The "bottom line" in the financial ledger is as important to farmers as to other business people. And the bottom line shows American farmers were wealthier at the end of 1977 than at the beginning.

But looking up a couple of lines from the bottom of the accountant's ledger, it shows that farmers also have more debts and they made less money than in 1976.

When all the numbers are in, economists expect total farm income in 1977 to have been a shade under the $20 billion of 1976. And, farm debt may rise $16 billion—a record rate of increase. Assets—the value of things owned—rose $59 million, leaving farmers with an equity gain—the difference between assets and debt—of $43 billion, the fourth largest gain on record.

The reason for the low income and high debt can largely be attributed to low farm prices, especially for grain producers.

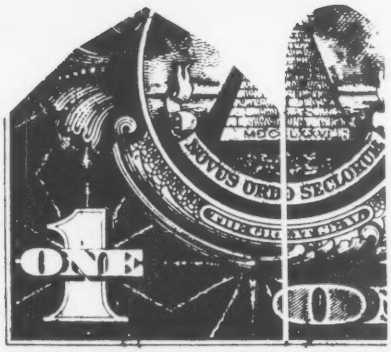
Sliding grain prices. Their incomes reflected the tumbling grain prices around the world. Prices for Soft Red Winter wheat at Chicago have plummeted from a 1973/74 high of $4.84 to well under $3 for most months in 1977. Corn and other feed grains showed similar drops. Recently, though, with this fall's slip in U.S.S.R. grain production prospects, American grain prices have strengthened.

The incomes of livestock producers, on the other hand, were bolstered some by the lower loan grain prices. Abundant feed supplies and lower prices helped poultry and egg dealers and dairy farmers, along with the meat producers.

Inputs cost more. All these farmers, along with the grain producers, had to deal with the rising costs of farm inputs, such as fertilizers, pesticides, and other chemicals. Prices of most farm inputs, including energy, continued on the upswing, but more slowly.

One effect of the low prices and reduced incomes is a delay in repaying farm debt. Many farmers are converting their debts and operating loans, for example, to real estate debt. That gives the farmer longer terms, and the lender more security. Real estate values have risen rapidly in recent years, and 1977 was no exception.

For all of 1977, farmland values are expected to rise 9-11 percent over 1976.



By contrast, the average acre of farmland in 1976 had jumped 17 percent. As of February 1977, the average acre was valued at $456, up $11 over November 1976 prices.

Trouble with credit. The higher land value was of scant help to a few borrowers in 1977. About 5 percent of them were viewed by lenders as having become unsatisfactory credit risks. If current economic conditions continue, these people will find it hard to borrow money.

But the lenders say this proportion is only slightly higher than normal. Most of the borrowers who have run into repayment problems are finding that lenders are working with them to find ways to repay loans.

The importance of credit to farming is monumental. Perhaps as many as two-thirds of U.S. farmers borrowed some money in 1977.

Banker talk. Bankers talk about their collection of loans like other business people talk about their products: in terms of "quality." And bankers in 1977 said the quality of their loan portfolios, or their collections of loans, held about the same as in 1976. The quality of the portfolios of cash grain and beef cattle producers lost some luster, but these problems were offset by improvements in the incomes, net worths, and repayment capacities of dairy farmers, producers of other livestock (primarily hogs), and tobacco growers.

Overall, the bankers say, their farm loans may be of better quality than their other business loans. But that strength may wither some in 1978.

A rocky road ahead. Looking ahead, economists foresee some problems, such as:

- The quality of farm loan portfolios will probably slip because of continued low farm prices and other factors.
- Land value increases may slow down, perhaps to 6 percent. If that happens, the urge to buy farmland as an investment, or as a hedge against inflation, may weaken.
- Poorly made farm loans, left over from 1977 or earlier, may result in losses to banks. Losses that in other years might have been shored up by rapidly rising land values could cut into the credit availability.
- Farm debts are projected to increase rapidly again in 1978. Real estate loans may rise more quickly, and nonreal estate loans a little less. Because it's anticipated that farm prices will remain too low for comfort, farmers will probably borrow more money for operating, but they may trim their spending. Less money will be available for personal "extras" and luxury items.

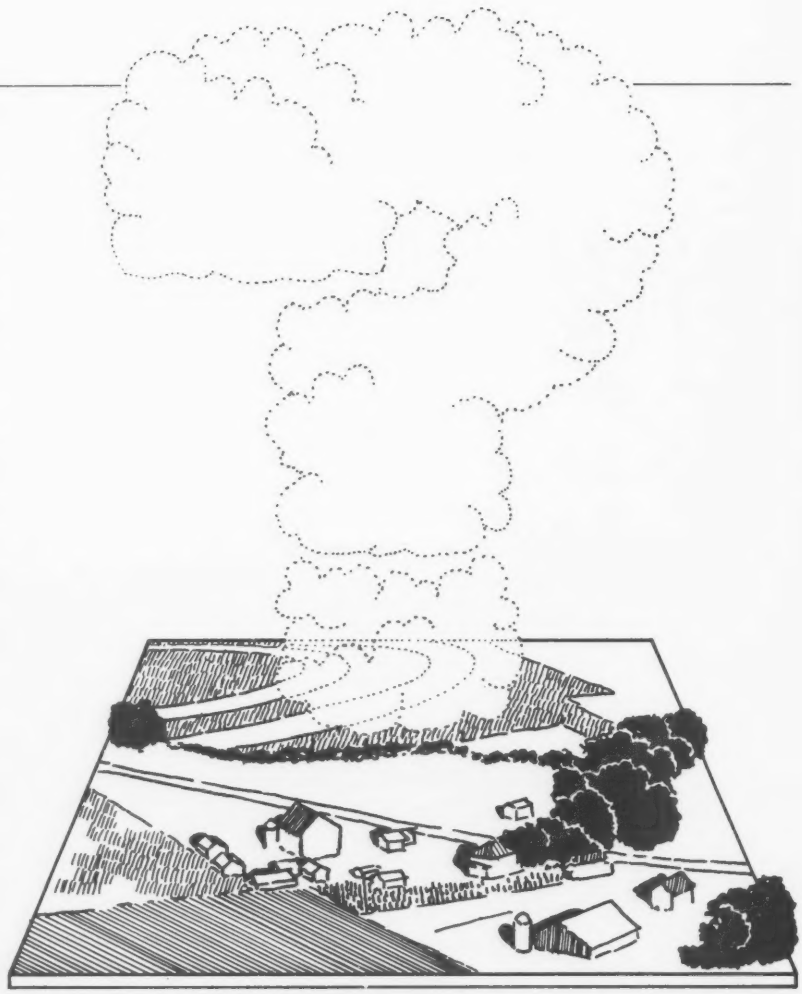
At least the skid stopped. The future isn't all bleak. In 1978, while farmland values may not rise as fast as they have in past years, the trend is still expected to be up. And farm incomes, which have stopped skidding recently, may become stable this year, with Federal price and income support activities under the Food and Agriculture Act of 1977 helping out.

[Based on the *Agricultural Finance Outlook, 1978*, compiled by the National Economic Analysis Division, with coordination by Philip T. Allen, NEAD.]

Annual Net Flow of Farm Loan Funds*

*Outstanding debt at beginning of year subtracted from outstanding debt at year end.
△Excludes Commodity Credit Corp. loans.
(1977 data are estimated.)

Divining Climate Trends: A 1999 Forecast?



What will the weather be like during the last two decades of the 20th century?

Although science has, in recent years, refined forecasting on a short-term basis to a reasonably accurate process, even climatic experts find little common ground of agreement when they project probable weather patterns over the next 22 years.

In fact, a panel of such experts not only failed to reach a consensus judgment, but panelists fell into three general viewpoints: those who predicted a global warming trend, those who foresaw a global cooling trend, and those who saw little change.

A starting point. At first glance, the diversity of opinion may seem of little more value than a survey of farmers' weather opinions at a general store. But, to USDA researchers, the panel's data provides a starting point in a major effort to offer agricultural policymakers better long-range weather information and data on possible effects on food and fiber production.

Why is USDA so concerned with such long-range trends?

In the past, the Department's crop estimates have been based on the assumption of "normal weather"—something that, as critics wryly note, doesn't exist.

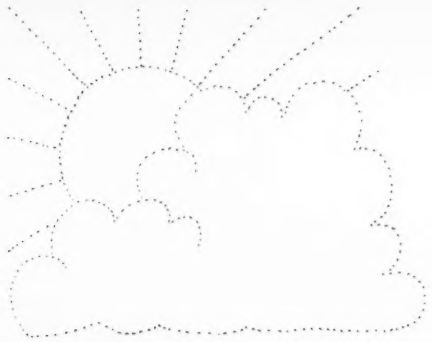
Weather remains one of the most crucial "production inputs" in farming—and by far the most uncontrollable and unpredictable.

Unpredictable input. Using relatively solid data on all other aspects of crop production, the USDA forecasts are vulnerable to the whims of never-normal weather. Farmers, who rely on USDA information in their decisionmaking, are understandably exasperated when forecasts are off the mark due to weather.

Faced with this problem—and with mounting criticism—USDA is now studying both historical weather data and the broader questions of longrun climatic change.

Looking over data from past years, ERS analysts are trying to isolate "weather-related" variations in grain yields by filtering out nonweather factors such as technological improvements, input variations, and acreage fluctuations.

Global grain variations. Grain yield variations that can't be attributed to other production factors are assumed to be due to weather variations. Weather-related annual variations in global grain production have generally ranged within 2 percent, and have never exceeded 6 percent in the period covered by data used in the study.



However, some areas of the world may have been much harder hit than the general statistics indicate, due to a netting-out process each year. In the Soviet Union, Oceania, and India, year-to-year deviations from the norm sometimes exceed 20 percent.

While data is available for analyses of historic trends, evaluation of longrun climatic changes is far more difficult.

Diverse future forecasts. Many experts suggest that the earth's climate may be entering a new weather cycle. But, the area of agreement quickly ends when the experts discuss how it may change:

- One popular contention among experts is that the cooling trend of recent years will continue. Meteorologists generally agree that world temperatures rose between the 1880's and the 1940's, followed by a decline since then.
- Another hypothesis is that we're on the verge of a warming trend due to the "greenhouse" effect of carbon dioxide accumulation in the atmosphere through fossil-fuel burnings. The gas supposedly allows solar radiation to enter the atmosphere, but traps the longer-wave outgoing radiation.

If temperatures increase or decrease, rainfall and temperature patterns likely would shift. The possible effects on agriculture have not yet been determined.

- Studies have shown parallels between cyclic sunspot activities and High Plains drought cycles, but there's no agreed-upon physical explanation of how sunspots can affect High Plains weather. According to proponents of the sunspot-cycle theory, another major drought is "due" on the High Plains.
- Another area of speculation is that weather may become much more variable in the future. There is evidence that the U.S. has enjoyed a low level of weather variability in recent years, which may be ending. Greater fluctuations could have a critical impact on crop production and, in fact, on all facets of agriculture.

Many unanswered questions. With scientists offering such widely conflicting assessments, it is clear that science doesn't know with certainty the cause of global climate change. There are no comprehensive theories, suitable models, or sufficient actuarial experience to supply the informational needs of policymakers.

Yet, the weather trends impact is so great that USDA is attempting to at least offer policymakers alternative scenarios for weather trends, at least until more concrete scientific data is developed.

In a novel research project now underway, USDA is joining with the Department of Defense and the National Oceanic and Atmospheric Administration in an attempt to obtain the best judgments from the experts on probabilities of climatic changes and the effects on U.S. and world food production through the year 2000.

Experts offer judgments. A panel of climatic experts were given a set of questions dealing with significant climatic factors, including variability. The experts gave their judgments about climatic changes, along with their admittedly uncertain assessments of the probability of the changes.

Preliminary analyses of the experts' responses show that the future average global temperatures are pivotal in setting the stage for other variables.

The experts' responses have provided the basis for five climatic scenarios that range from a large global warming to a large global cooling.

Warmer weather proponents. Warming trend proponents explained their reasoning primarily in terms of the likely long-term dominance of the carbon dioxide warming effect, in relation to a possible slow natural cooling.

Those who leaned toward the cooling-trend viewpoint indicated that the warming effects of carbon dioxide won't be as great as proponents suggest, or that its effect will be overshadowed by natural long-term solar-induced climate cycles leading to cooling.

In the middle ground, others argued that the cooling trend and carbon dioxide increase will balance each other, thus allowing little change.

The long-range outlook for rainfall found even less area of agreement among panelists, but the responses do suggest fairly strong support for the existence of a quasi-20-year periodicity in the frequency of droughts in the U.S. The casual mechanism of this apparent periodicity, however, was clearly in dispute.

Agricultural impacts. The next step in the effort is to evaluate the climatic information in terms of possible impacts on world agricultural production.

Another panel of experts has been assembled to study the impact of given temperature and precipitation changes on the yields of grains and soybeans in eight countries.

This phase of the study, which will take several months, will allow USDA experts to project the agricultural impacts of the alternative scenarios of climatic changes through the year 2000.

[Based on the talk, "Climate Changes—Commentary," by William Gasser, Foreign Demand and Competition Division, presented on November 14, 1977, at the 1978 Food and Agricultural Outlook Conference, Washington, D.C.]

From Farm to Grocery Shelf: the Gap Widens

The product that leaves the farm often bears little resemblance to the food item on the grocery shelf, including the price tag.

For 16 food products, studied and reported on by ERS, the difference between farm prices and retail prices amounted to as much as 90 percent of the grocery store price of an item in 1975. None of the items had a marketing spread of less than one-third.

The 16 leading farm food items studied were beef, pork, fluid milk, butter, eggs, broilers, oranges, lettuce, potatoes, bread, canned tomatoes, catsup, frozen concentrated orange juice, cooking and salad oil, shortening, and margarine.

Price spreads for nearly all these products widened in 1975, but they were greater for crop products than for animal products. The difference can be traced to the slowness of price changes from farm to retail.

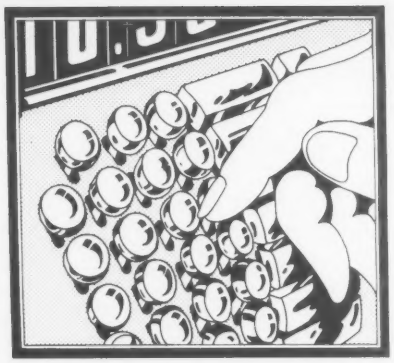
Return to retail. For example, returns to farmers for crop products took a serious dive in 1975, but retail prices didn't change as fast. The result was a large increase in the farm-retail price spread.

Spreads are generally higher for those products that required a lot of processing—such as vegetables—and lower for products that required little processing, or for which the processing costs were small relative to the overall value, such as meat.

The spread between farm and retail prices has gotten wider every year for the past decade.

In most years the increase in the spread is about the same as the inflation rate. In 1975, the price spreads for the typical market basket of foods—65 selected items—jumped 9 percent. But that was less than half the record jump of the year before, 20 percent.

The source of the spread. Increases in price spreads came from numerous



sources, but generally they reflected the rising costs of labor, packaging, energy, and other inputs involved in food processing and distribution.

While the farm-retail price spread continues onward and upward, the farm value of food hasn't changed much in the past 4 years, and it probably won't change in 1978, either. Economists expect it to hold, while retail food costs climb another 4-6 percent, due mainly to higher marketing charges.

Price spreads and the costs of various marketing functions, such as processing and transportation, are different for various commodities.

Proportionate differences. Price speads are about one-third of the retail cost of beef, pork, broilers, eggs, and butter—the smallest proportion of the 16 items.

Costs of slaughtering, for instance, made up only 18 percent of the spread for beef, and 28 percent for pork and broilers. Making pork into hams and bacon accounts for higher processing costs, thus a greater spread.

The spread rose to slightly over a third for eggs. Packing costs in 1975 were 9 cents a dozen, including 4 cents for the carton. Manufacturing costs for butter were about 10 cents a pound, or less than 30 percent of the spread.

The cost of operations. The retailing margin accounts for a big part of the spread. This margin is the difference between the amount a store manager pays for merchandise, and the amount the merchandise is sold for on the retail level. It includes all the costs for operating a store. For beef and pork, the retail margin accounts for more than half of the spread. The retailing margin for broilers is slightly less than half of the spread.

The margin, in a recent ERS study, was slightly less for pork than beef because only fresh pork items must be cut and wrapped in the retail store. The study assumed the stores bought carcass beef, doing all the cutting and wrapping themselves. Some stores buy meat partially cup up from warehouses or meat-packing plants.

Eggs' small margin. Retailing margins for eggs and butter, although lower than for beef and pork because eggs are packaged and ready for sale, were the largest part of the farm-retail spread—about two-fifths of both items in 1975. The spread for fresh fluid milk was about the same as the farm value. Processing alone made about a third of the spread, with labor and packaging the main costs.

The largest cost in milk marketing is wholesaling, which consists of the delivery of milk to the retail store from the processor. Wholesaling is equal to slightly more than a third of the spread—14 cents per half gallon in 1975. The retail margin for milk is about a fourth of the price spread, or 12 percent of the retail price. Twelve percent of the retail dollar is a comparatively low retail margin, kept down because of the relatively low labor handling costs in the store, and high sales volume.

Costly processing. The spread for processed fruits and vegetables is large, often amounting to three-fifths, or more, of the retail price. Most of the spread is tied to processing and container costs. Costs for canned tomatoes, for example, were about 9 cents a can for cans, cases, and labels in 1975—almost double the farm value of the tomatoes themselves.

Frozen concentrated orange juice (FCOJ) processing costs are also relatively large. They amounted to nearly half the spread in 1975, with packaging costs at the top of the cost list—3.4 cents a 6-ounce can, well over a third of all processing costs.

The FCOJ retail margin was about 22 percent of the store price. That covered the selling costs, and still made an above-average contribution to store overhead and profit.

The staff of life. A chilling tale is told about the sale of white pan bread. Production and selling the loaf made up four-fifths of the retail cost in 1975. The farmer's share of the shelf price, for all the farm ingredients in the bread, came to only one-fifth. Since 1975, it has declined to about one-eighth of the retail price, due mainly to the sharp drop in wheat prices. Processing and wholesale distribution costs take the lion's share of the marketing spread.

In 1975, the average loaf sold for 36 cents. Eleven cents of that paid for baking, slicing, and wrapping. Delivery by a sales person took 12 cents. And the retail margin was 5 cents, or 13 percent of retail in 1975. The farm value of the ingredients was 6.8 cents.

Stocking the shelves. The retail margin for bread was low, less than the store average. That's because the sales person is the one stocking the shelves, rather than store employees.

The farm-retail price spread may widen again in 1978. The 1977 farm output was record large, and prices to farmers were low for many products. But retail prices, while rising more slowly than they might have because of the low farm prices, will probably continue their seemingly inexorable climb.

[Based on "Cost Components of Farm-Retail Spreads for Selected Foods," by the National Economic Analysis Division and the Commodity Economics Division.]

A Bleak History for Striking Farmers

Caught between rising production costs and falling farm income, many farmers across the Nation joined a "farm strike" last month to seek better prices for their goods.

While farmers have long endured the "boom or bust" farm income cycles that result from the frequent variations in economic conditions affecting farm income, one farmer wryly noted that the cycle has, for him, become "bust or bust."

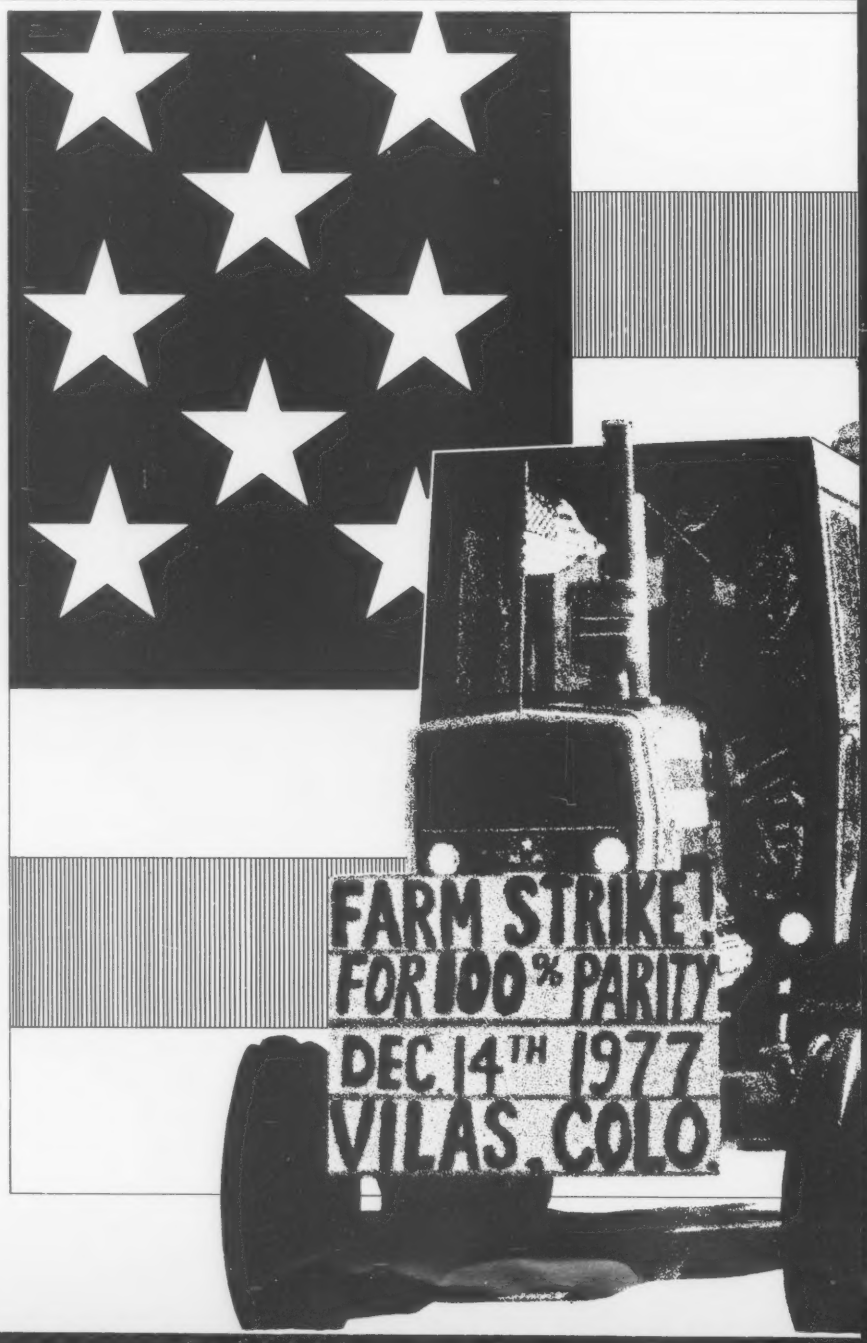
With this in mind, some farm group leaders hoped to boost prices by withholding products from the market until the price would rise to desired levels—an attempt to make the law of supply and demand work in the farmers' favor, in the same manner that business enterprises profit by orderly or controlled marketing.

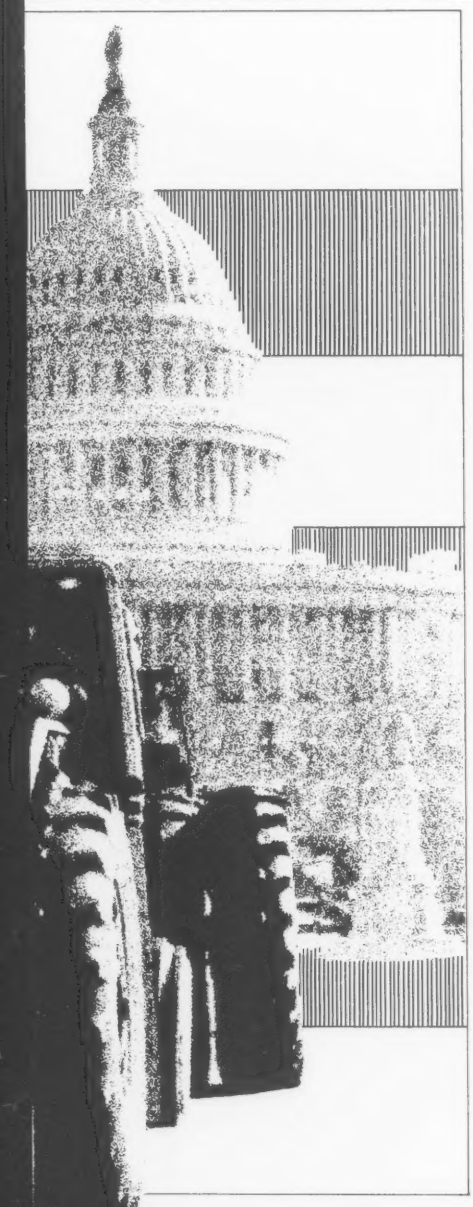
Historical precedents. The idea of holding products off the market is, of course, far from new. Various farm groups have tried it over the years, yet none has succeeded in obtaining better prices except for very short periods.

A major problem faced by any farm strike is to attract enough participation to affect supply significantly. At times in the past, the efforts to recruit participation became violent.

In 1904, the Southern Cotton Association sought voluntary acreage reduction, and proposed strong measures to keep the price-depressing surpluses from the market. Some Texas farmers talked of burning a bale of cotton each Saturday for 15 weeks to eliminate 2 million bales from the market.

The issue became more heated, and violence occurred 4 years later when "night riders" tried to keep some farmers from picking their cotton, and burned a number of gins. Yet, the price of cotton wasn't measurably affected.





Specialty cooperatives. At about the same time, many cooperatives were organized to market specialized crops grown in limited areas—particularly on the Pacific Coast. Since they could effectively control marketing because of the specialty crop's limited production area, these cooperatives succeeded, and many are still active.

The success of these specialized crop cooperatives led in 1920 to a new movement that called for "orderly commodity marketing and prosperity."

The movement called for establishment of State or regional single-commodity cooperatives, each controlling enough of its respective crop to decisively affect prices.

Regional and, after the American Farm Bureau Federation became active, national marketing organizations were formed for cotton, tobacco, wheat, peanuts, rice, livestock, and many other products. Farmers signed "ironclad" contracts to market only through these groups.

Failure to control. Despite such efforts, these groups of the early 1920's failed to control enough of their crops to sway prices for long.

Wheat organizations, for example, were formed to market the product in an orderly, effective manner. Wheat was to be held off the market until a satisfactory price was obtained.

In 1924-25, 10 such groups, with 96,800 members, marketed nearly 28 million bushels of wheat—which was only 3.8 percent of the total U.S. commercial crop. Net returns to members appear to have been slightly less than to nonmembers.

At the same time, 15 large cotton associations handled 8 percent of the total ginnings, and 28 associations marketed 1.9 million cattle and calves out of the 24 million total.

Comparison shows why. Comparing such relatively small percentages of market control for major crops with the control exercised by specialty crop cooperatives quickly shows why non-specialty groups failed. Dried prune associations controlled 42.4 percent of the marketing in that period, and rice associations handled better than a fourth of the crop.

After suffering such setbacks, many large-scale cooperatives went out of business. Even where temporary price increases were obtained, nonmembers often profited more than members.

The leaders of the "orderly commodity marketing" group resigned from their positions with the American Farm Bureau Federation early in 1924. The Farm Bureau thereafter endorsed cooperative marketing, but did not promote the idea of market control through farmer action alone.

Coolidge's veto. Meanwhile, farmers demanded Federal help to boost sagging prices. President Calvin Coolidge twice vetoed the McNary-Haugen bill for farm aid in 1927 and 1928, making it a campaign issue in 1928.

After Herbert Hoover became President, he signed the Agricultural Marketing Act, which established the Federal Farm Board and emphasized voluntary orderly marketing through cooperatives.

The new Board helped farmers to organize cooperative marketing associations, and made loans to such groups. It also made loans to wheat and cotton stabilization corporations, which were set up by cooperatives to control price-reducing surpluses. However, the great depression doomed the Farm Board.

In its final report, the Farm Board noted the difficulty of attaining market control without production control.

Farmers' holiday. As the depression deepened, the farm situation became desperate. While some demanded strong Federal action, others began talking of a "farm strike."

The strike was to begin July 4, 1932, under the slogan "Stay at Home—Buy Nothing—Sell Nothing." It was sponsored by the new Farmers' Holiday Association. The "holiday" in the title was a pointed jibe at the euphemistic term "bank holiday" which meant that the bank was closed in bankruptcy.

The strike was delayed a month, then began in August in the Sioux City, Iowa area, where roads were blockaded and some violence occurred. The movement spread across the Midwest as farmers converged on State capitals to demand a moratorium on mortgage foreclosures and some farm relief legislation.

Fleeting milk price gains. Farmers did win higher milk prices in Sioux City and Omaha, but the gains were erased as soon as picketing ended.

Strike activities ceased during September, then returned on a sporadic basis into 1933. In many areas, protestors used force to block mortgage sales. This caused some State legislation to ease the debt situation.

Another national farm strike, set for May 13, 1933, was cancelled when the Agricultural Adjustment Act was signed the day before the strike date. But a milk strike occurred in Wisconsin that month and, after higher milk prices failed to emerge, again in October. The fall milk strike was marred by violence.

Sending a message. Although the strikes did not succeed in raising overall farm prices, they dramatized to the Nation the serious plight of U.S. agriculture, and instigated immediate and strong legislative action to ease the crisis.

During the next quarter century, Federal programs, fairly good markets, and a steady increase in productivity offered a reasonably healthy climate for farmers.

Farmers again began to suffer cost-price squeezes in the late 1950's. The National Farmers Organization (NFO) encouraged farmers then to hold produce off the market until prices reached a "reasonable" level.

Two strategies. The NFO has used two types of "holding actions":

- Test holding actions of short duration involving a limited number of commodities. The aim is to sample farmer support and market reactions.
- All-out holding actions, with the goal of reaching agreements with processors to "stabilize prices and marketing conditions in the future."

The NFO's first all-out action in 1962 called for withholding hogs, cattle, sheep, corn, and soybeans from the market. Two years later, a second all-out action focused on livestock withholding.

Some limited violence occurred during both actions. The NFO leadership strongly opposed violence by members.

Both claim victory. The goal of forcing processors to sign contracts wasn't achieved to the extent that NFO could control marketing, but both the NFO and processors claimed victory.

In 1967, NFO members in 25 States turned to milk prices by seeking to boost prices for farmers by 2 cents a quart. Again, some violence erupted, and the Department of Justice obtained a temporary court order in Des Moines, Iowa, barring the NFO from using threats or force to enforce the strike.

The next year, the NFO sought higher grain prices through withholding, then extended the action to animals. Local farm groups killed and buried many hogs, and donated some to charities rather than send them to market.

Destroying the surplus. As the 1970's arrived, several local farm groups were withholding or destroying farm commodities. The most controversial example was the slaughter and burial of dairy calves in Minnesota and elsewhere—although, in some instances, meat was donated to disaster victims.

In many cities, dairy farmers sold cheddar cheese from the backs of trucks at half the usual prices, claiming that the normal distribution system offered them even less.

The same pattern of sporadic withholding or destroying of commodities continued into 1975.

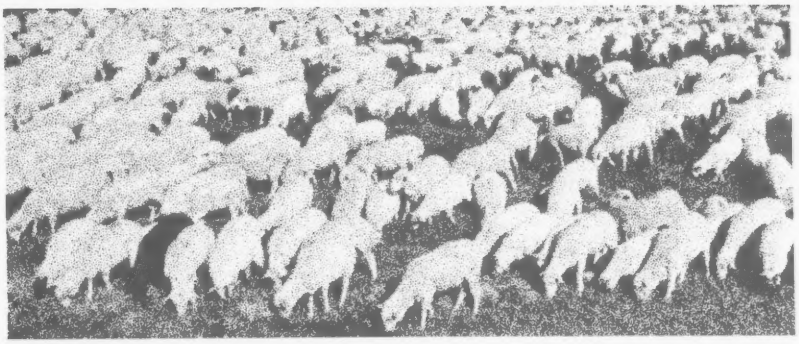
Late in 1977, a new farm group, the American Agriculture Movement, called for a national strike by farmers for better prices, then began setting up offices in farm areas. Members rallied support for the December 14 nationwide strike with parades of farmers with their tractors in rural areas—such as the November 25 rally in Plains, Georgia.

Bucking historic trends. It is still to be seen if the major goal of the recent actions—to bring economic improvements for farmers—will pan out. If it does, it will be exceptional in the historical context.

Although such actions in the past haven't measurably affected prices to farmers, recently they have dramatized the cost-price squeeze.

[Based on special materials from Wayne D. Rasmussen, Agricultural Historian, National Economic Analysis Division.]

Sheep Case Back to the Fold



The struggle to keep the sheep industry economically healthy goes on, and recent favorable lamb prices are helping in the uphill battle.

Since 1974, prospects for sheep production have brightened, principally because of higher lamb prices —lamb sales account for the majority of sheep profits. Add to this the recent upsurge in wool use in the U.S.—although it's still not as high as it was 20 years ago—and it appears some of the slippage in sheep raising may have slowed.

Sheep headed downhill. Since the 1940's, U.S. sheep numbers have generally declined. The dip has been due mostly to fewer sheep in the West, where 80 percent of the Nation's sheep are raised. Producers say past problems of low sheep prices relative to cattle, high predation losses, and labor shortages helped convince some farmers to get out of the sheep business.

The West had nearly a third of the Nation's sheep raisers last year, and the herds are generally much larger than elsewhere, averaging over 200 head in 1976. Some western producers have sheep numbering in the thousands. The rest of the country has herds averaging 80 head.

Western sheep raisers have been quitting at an alarming rate. In 1964, there were nearly 86,000 producers in the western region. By 1974, there were less than 52,000—a 40-percent reduction.

The little guys leave. Most of those leaving the business were small-scale producers. While the same pressures hit both the large-scale ranchers and the farm-flock producers, it's the farmer with a small operation who is more likely to drop out of business.

While the problems such as predation may take more sheep from large-scale producers—because they have more sheep in the first place and are more likely to pasture them in the open range—the effects of the losses and low prices can be calamitous to the farm-flock producers.

Since 1974, prospects for successful large-scale sheep production have brightened some because of higher lamb prices, although data aren't yet available spelling out how much the rate of decline of sheep production has eased.

Small herds and big percentages. The biggest drops in sheep operation numbers have come from these smaller herds. Operations with less than 300 sheep fell by 40 percent in the 1964-74 decade, and those between 300 and 1,000 head disappeared at a staggering 46-percent rate. Meanwhile, the largest operations—those with 1,000 or more sheep—fell 31 percent.

Sheep numbers, too, have been on a downhill slide. They fell from over 18 million in 1964 to less than 11 million head in 1974. More than half the losses—4.2 million out of about 7 million—came from the largest operations. Sheep numbers on these ranches plummeted 38 percent, from 11.1 million head to 6.9 million.

Big operators switch. Large producers have tended to switch their operations, either from sheep to cattle, which require less labor, or to other agricultural enterprises. In a few cases, sheep producers, regardless of the size of their operation, have dropped out of the business of agriculture altogether, retiring, perhaps, or using their time for nonfarm employment.

The farm-flock producers, particularly, have tended to leave agriculture entirely, and for many of the same reasons other small-scale farmers all over the Nation are getting out. For many, more attractive opportunities presented themselves, offering the same or more money, for less time and labor.

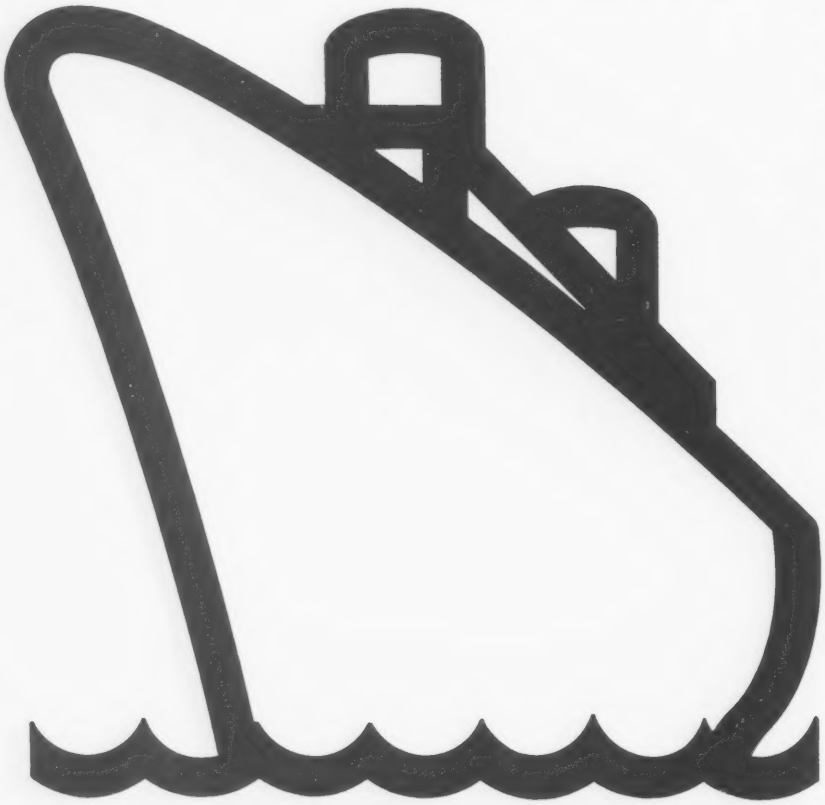
With nearly two-thirds of the former producers in Wyoming saying predation losses helped them decide to get out of the sheep business, the importance to western producers generally of controlling predators is clear.

Since the restrictions on poisons, sheep producers have turned increasingly to aerial gunning of coyotes. It's expensive, but many producers believe it's been effective in reducing coyote numbers and predation losses. Recent success has been encouraging to some producers.

Some sheep will stay. At any rate, with farm prices for lambs rising quickly, sheep raising remains attractive to large-scale operators, both financially and because some people like the occupation. If predation losses can be reduced, and if lamb prices remain favorable compared with cattle, many large-scale operations will probably continue with sheep raising.

[Based on *Factors in the Decline of the Western Sheep Industry*, by C. Kerry Gee and Richard S. Magleby, Natural Resource Economics Division; Darwin B. Nielson, Utah State University; and Delwin M. Stevens, University of Wyoming.]

U.S.-EC Farm Trade: A Thriving Partnership



American farmers have long looked to the European Economic Community (EC) as an outlet for their agricultural products. And with economic growth and higher levels of living, the EC will likely continue to be a large and expanding market for U.S. farm products.

A recent ERS study analyzed U.S. agricultural trade developments with the EC since 1972. The results showed that during this period, U.S. exports to the EC increased, but at a slower rate than to the rest of the world.

For instance, U.S. agricultural exports to the EC-9 (France, Belgium, Luxembourg, Italy, the Netherlands, West Germany, Denmark, Ireland, and the United Kingdom) totaled over $6 billion in 1976—almost three times their 1970-72 average value. Exports to the rest of the world were about $15 billion—more than three times their 1970-72 average value.

Major exports. Nearly three-fourths of the increase in U.S. agricultural exports to the EC came from feed grains (mainly corn) and oilseeds and products (principally soybeans and oilcake and meal). Expansion of the EC's livestock industry, plus grain production declines in 1975 and 1976, helped stimulate U.S. exports of these commodities.

Because of this situation, American farmers rely heavily on the EC as a market for feed grains and oilseeds and products. In 1976, for example, the EC took one-third of U.S. feed grain exports and over two-fifths of the oilseeds and products. Together, these commodity groups accounted for two-thirds of total U.S. agricultural exports to the EC in that year.

Other exports. Other important exports were tobacco, wheat, vegetables and preparations, hides and skins, fruits and preparations, corn gluten feed, and variety meats.

Although the EC is the largest foreign market in the world for American farm goods, U.S. sales of agricultural products to the EC would undoubtedly be greater if it weren't for the trade restrictions imposed on the U.S. and other nonmember countries by the EC's Common Agricultural Policy, begun in 1962.

Such restrictions are implemented principally by the system of variable import levies—designed to offset the difference between the world price of commodities and the desired price in the Common Market.

Exports of variable levy commodities up. Up to the early 1970's, U.S. exports of commodities that were subject to such levies were held in check. But, except for the first half of 1977, it's been a different story. In 1976, U.S. exports of variable levy commodities were nearly four times their average value in

1970-72, while exports of nonvariable levy commodities were slightly more than two times their 1970-72 average value.

U.S. corn exports accounted for almost 80 percent of the increase in the exports of variable levy commodities. In fact, when corn exports are removed from the variable levy commodities total, the adjusted gain from 1970-72 to 1976 is the same as for the nonvariable levy commodities.

Early 1977. For the first half of 1977, U.S. exports of variable levy commodities were only moderately above their value for the previous year, while nonvariable levy commodities were substantially more than the 1976 level.

Among the variable levy commodities, a significant increase in the value of U.S. exports of feed grains and corn byproducts was more than sufficient to offset export declines for wheat, rice, and poultry and eggs.

For nonvariable levy commodities, the export value rise during the first half of 1977 resulted mainly from an increase in exports of oilseeds and products—reflecting smaller supplies of grains and increased needs for proteins in the EC.

Oilseeds and products. The enlargement of U.S. exports of oilseeds and products equaled nearly two-thirds of the total export value increase in nonvariable levy commodities. Other noteworthy gains were for enedible tallow, cotton, corn gluten feed, hides and skins, and tobacco.

As for imports of agricultural commodities from the EC, they, too, have been on the upswing since 1972, although not as much as our imports from the rest of the world. (The leading beneficiaries of EC agricultural trade are the EC member countries themselves.)

Major U.S. imports from the EC include wine, pork, malt beverages, cheese, vegetables and preparations, and hides and skins.

Smaller American market. The U.S. is a much smaller market for EC agricultural products than the EC is for our farm goods. In 1976, for example, U.S. imports of $1.2 billion from the EC were less than one-fifth of the value of U.S. agricultural exports to the EC.

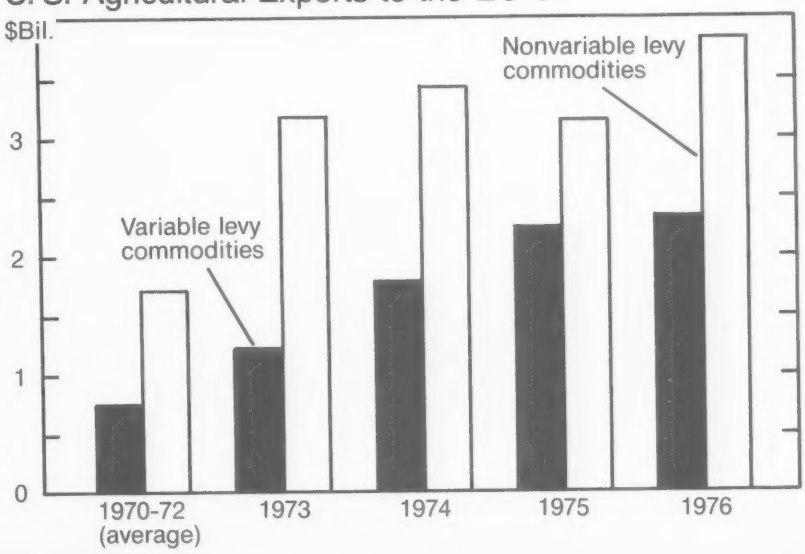
Two factors account for this: The U.S. is a larger producer of agricultural products and has experienced a relatively greater growth in agricultural production than the EC. For instance, by 1976 the U.S. had expanded per capita agricultural output 15 percent from a decade earlier, compared with only 8 percent for the EC.

Probable developments. As for the future of U.S.-EC agricultural trade, the ERS study pointed out several probable developments that will need to be analyzed. These include:

- The enlargement of the EC (negotiations are underway with Greece for that country's full membership, and Spain and Portugal have applied for membership), its continuation of special trade agreements and preferences, and the effect of the EC restrictions on the trade area accessible to the U.S.
- The stimulus to EC production increases within the trade-sheltered area and consequent competition for U.S. farm exports.
- The extent of the diversion of products from the larger, protected EC market and its competitive impact on U.S. agricultural exports.

[Based on the manuscript, "U.S. Agricultural Exports to the EC: Continued Growth?", by Robert L. Tontz, Foreign Demand and Competition Division.]

U. S. Agricultural Exports to the EC-9



Commodity Profile:

The Squeeze on Citrus Groves

To keep the chill out of the groves, citrus farmers are experimenting with new frost protection systems.

Efforts to protect against frost damage were highlighted by last year's Florida freeze, which helped slash early and midseason orange production in that State 23 percent. There's no way to predict whether Florida could be hit by another freeze, so estimates of 1977/78 production are jittery, at best, at this time of year.

Protection from frost could help stabilize production. Dramatic changes in frost protection methods have been seen over the past two decades, especially in California.

Oil burners cut off. Back in the 1950's and 1960's, clean air laws in California—and to lesser degrees in other States, too—forced growers to start looking for new ways to protect groves from frost. They had used simple oil heaters to heat the air near trees. Wind machines were sometimes operated to make each heater effective over a wider area, but the machines still used large quantities of oil, with fumes adding to air pollution.

As the price of energy escalated, and labor for operating the heaters got harder to find, researchers looked for ways to use less oil—or in some cases, natural gas—and still protect fragile citrus crops. Newer methods include greater use of fans to blow warm air over the trees. The warm air may come from heaters, or from warm-water ditches.

Popular edibles. Preventing the fruit from freezing is important to growers, and to citrus consumers. Americans are using citrus in ever-increasing amounts. Since 1960, per capita consumption has jumped by over a third, to an average 120 pounds (fresh-weight equivalent) in 1976.

Part of the reason for rising consumption was the development of frozen concentrated orange juice. It began getting into home freezers and kitchens in the late 1940's, and has demonstrated a continued uptrend ever since. Previously, the bulk of the citrus crop had been consumed fresh, with small amounts going for processed uses such as canned juice.

Fresh use sinks. By 1976, fresh citrus consumption had fallen below 30 pounds per capita, while processed citrus consumption had rocketed to 91 pounds (fresh-weight equivalent). Back in 1950-54, fresh use averaged about 44 pounds, and processed was only 39 pounds.

Consumption of frozen concentrates takes the biggest share of processed citrus use. It's up to 62 pounds a year. That compares with only 20 pounds back in 1950-54.

All in all, production has expanded rapidly. Producers have more than kept pace with consumption, doubling output since 1960, with most of the increases coming from Florida.

Investing in acreage. Boosts in production from Florida—registering a 65-percent gain between 1949/50 and 1970/71, swelling orange-bearing acreage from 300,000 acres to 690,000—were spurred not only by increasing domestic and foreign citrus demand, but also because certain tax advantages were available to investors in orange groves. (These incentives have since been removed.)

The investors planted many trees during the 1960's. Those trees are only now coming to maturity, as the leading edge of a trend toward even greater production. Supplies have been large, with production outstripping use in some years recently.

COMMODITY PROFILE: CITRUS FRUITS

Production	**1977/78 forecast, 14.3 million tons, down 6 percent from the 1976/77 record**
Farm value	**$964 million, estimate for 1976/77**
Leading States	**Florida, California, Texas**
Foreign trade	**By far the world's largest exporter of citrus, the U. S. shipped 1 billion tons for the 1976/77 fiscal year, with Japan the largest customer.**
Trends	**Citrus consumption will probably increase annually per capita, as Florida production expands.**

Except for 1977, returns to growers have been relatively low because of pressure from the large supplies. Consumption is still increasing, but not as fast as during the 1960's.

Eyes on Florida. The entire citrus industry watches Florida orange production. It accounts for the lion's share of all citrus, and output has been cut.

In 1975/76, production climbed to 181.2 million boxes, and output in 1976/77 shattered all records, at 186.8 million. (National production was about 244 million boxes.) But 1977/78 orange production is down sharply in Florida, to an estimated 164 million boxes. Last winter's Florida freeze helped make the early and midseason crops the smallest since 1971/72.

The Florida orange crop is more than triple the size of California's. There, production of all oranges—early, midseason, Navels and Valencias—will total an estimated 46 million boxes, compared with Florida production of 164 million. Texas is expected to produce over 6.3 million boxes in 1977/78, and Arizona may pick just over 4 million.

Expensive pickings. The harvesting in all these States is the major annual expense for growers. In Florida alone, during the peak of the 1974/75 season, 27,000 pickers were on the job. Experts say that during that season, supply and demand of labor were approximately in balance, but even so, costs are formidable.

With citrus prices to growers not changing much over the years, while other costs have risen annually, producers are always on the lookout for ways to shave their costs.

Mechanization has been a big help. On many modern citrus farms, about the only handwork left is the picking, with automation handling most of the loading, unloading, sorting, and packing chores.

Machines hit snags. Development of mechanical harvestors has been held up by a host of problems. For one thing, the fruit clings to the tree tenaciously. To combat this, scientists came up with chemicals that aid in abscission—loosening the fruit from the tree. Even without mechanical harvesters, abscission chemicals come in handy because they make picking quicker and easier.

Besides fruit that hangs on, researchers are grappling with the problem of groves failing to ripen evenly. The same tree might be harvested three or four times in a single season. A mechanical harvester would not be able to choose which fruit is ripe. Chemicals are being developed that will cause all the fruit on a tree to ripen at the same time.

Dropping leaves. Abscission chemicals aren't perfect, yet, though. Growers say many of the chemicals cause not only the fruit, but the leaves as well, to fall from the tree. And some other chemicals mar the appearance of the fruit, making it unacceptable for the fresh market.

These problems are being slowly overcome. Currently, a mechanical system is being studied in Florida that is about 90 percent effective, when used under proper conditions and with the aid of abscission chemicals. The machine is a "shaker," which literally vibrates the fruit from the tree, which is then picked up by machines.

Spreading groves. The mechanical systems are needed to harvest groves

Continued on p. 22

This Year's Crop

Last winter's freeze, coupled with efforts by producers to cut back, has landed a one-two combination on citrus output.

The latest data from the Statistical Reporting Service forecast a 1977/78 citrus crop of 14.3 million tons—6 percent smaller than the previous year, and 3 percent less than 1975/76.

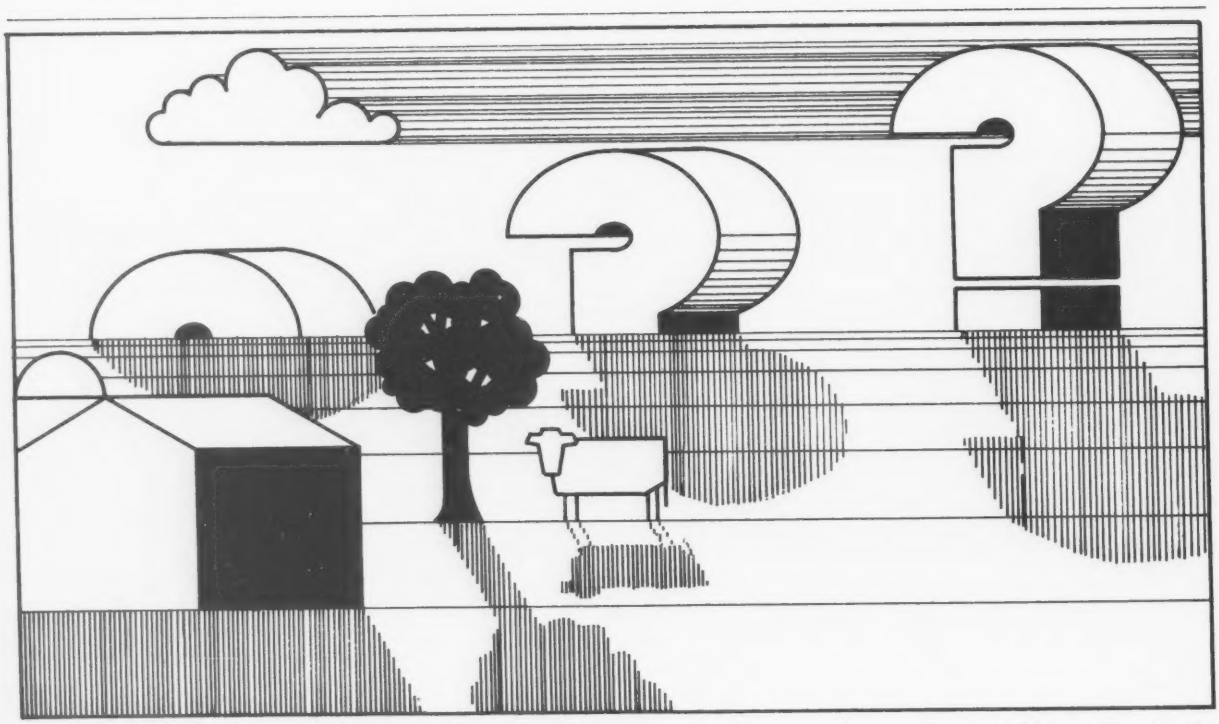
Production cuts were paced by Florida oranges, where output might be 12 percent smaller than 1976/77. Here's a breakdown of the expected production:

- All oranges—220.4 million boxes, 10 percent below last season.
- Florida oranges—164 million boxes, a 12 percent drop.

Florida Temples—A whopping 37 percent above last season's small crop, they could total 5.2 million boxes.

- California oranges—46 million boxes, 1 percent below last season.
- California Navels—21 million boxes, down 18 percent.
- California Valencias—25 million boxes, 19 percent larger than last season.
- Texas oranges—6.3 million boxes, 9 percent smaller than last season.
- Arizona oranges—Production of just over 4 million boxes, 4 percent larger than a year earlier.
- Grapefruit—A record 76 million boxes, 2 percent above last season.
- Lemons—About 25 million boxes, 2 percent smaller than last season's large crop.
- Florida limes—500,000 boxes, about half last season's production.
- Tangelos—5 million boxes, 4 percent about last season.
- Tangerines—5.9 million boxes, 2 percent above last season.

Beyond the Horizon



As the world takes a bead on the 21st century, farmers find themselves wrestling with increasingly complex problems.

Added to the inconsistencies of the weather are uncertainties in the home economy, the world economy, and the availability of energy and chemicals.

Peering beyond 1985 is a difficult task at best. Seeing the future with any accuracy requires a crystal ball not yet invented. Even so, the ability of farmers to deal with uncertainty gets stronger all the time.

Along the lines of "good news, bad news" stories, economists help farmers cope by working out probable results of likely future happenings. If that job sounds as if it rests on an unstable base, it does. The idea is not to predict the future. It's to get people thinking and talking about planning, and to provide useful information for the future.

Shifting patterns. For example, U.S. population growth patterns are changing. The birth rate has declined dramatically in recent years, and may continue downward. If it does, in the next 10 years we'll go through a series of changes. For instance, primary and secondary schools in local systems will be released from the burdens of rising populations. That should make a big difference to most communities, where education takes the biggest bite from the public budget.

At the same time, the crush on the local police departments just might slacken. Fewer children will enter the teens and early twenties—the age groups responsible for much of the increase in crime nationwide.

It cuts both ways. Fewer people will also be entering the labor market—a fact that is a two-edged sword. On the one hand, it means less unemployment. On the other, it means a possible shortage of labor in some categories, strongly affecting the farm labor market, which relies heavily on young people. Other participants in the food and agricultural complex might also be affected, such as stock clerks or warehouse employees, who are often from the junior ranks.

This changing of the population mix—moving toward one that's general-

ly older—could also have political and social ramifications. Society might become more stable and more conservative. The interest in the concerns of older people—such as adequate incomes and care for senior citizens—might be moved up a notch or two on the priority totem.

People want elbow room. Another trend: Nowadays, workers seem to be looking for more than a place in the sun. Many of them want more living room. From 1970 to 1974, 1.6 million people moved into nonmetro counties, causing a population growth in these counties of nearly 6 percent. Metro counties grew less than 4 percent. This redistribution of the population is the first of its kind in the Nation's history, except possibly for a short period during the Great Depression of the 1930's.

Farmland is often the recipient of the emigration from the cities. A majority of the growth in the 1970-74 period occurred in counties with no cities over 10,000 population.

Urbanizing America. If the trend continues, it will dramatically alter our concepts of manufacturing areas and retail centers. The urbanization of rural America could well put the farmer in greater competition with manufacturing, energy development, rural nonfarm residences, transportation facilities, and recreational use of our limited resources—water, air, forests, and space. Investment opportunities will present themselves as farm and nonfarm living and working become more intertwined.

In recent years, a major emphasis of society and Government has been aid to the disadvantaged. Those concerns for the poor and the needy are likely to strengthen in the future. Major food, housing, and welfare programs may be restructured to provide a wider range of services.

The country doctor shortage. One area that might get more emphasis is medical services in rural areas. As more people leave the cities, concerns about doctor and hospital shortages in rural areas may spark sharp debate about how best to provide adequate health care to everyone. With that debate could come increased concern about worker health and safety standards, especially for those people in hazardous occupations. That includes agriculture.

Farmers may anticipate bolstered efforts to organize farm labor into unions. The tightening labor supply may also act as a spur in the unionization effort.

An ERS projection is for a large increase in wages, and a food cost increase along with it. But the wage boosts—for farm workers and others—will probably more than offset the jumps in the cost of food.

Keep the country clean. Out in the country, the recent arrivals will probably show more concern than ever over environmental problems. More controls on land use, more recycling programs, and increasing interest in closer management of polluting resources such as fertilizers are the results of the concern.

Some of this activity will be tied to energy—a subject that earns a special niche in the murky chamber of post-1985 projections. The public has, since 1974 oil shortages, become acutely aware of our dependence on energy: Oil, natural gas, coal, nuclear power, and solar energy have all become standard American dinner table subjects. Many energy sources—oil, gas, coal, uranium—are hidden under farmland. The search for them is already the cause of serious debate.

Return of the railroads. Coupled with energy concerns are transportation problems. We'll need new transportation facilities, if more people are going to be living farther apart from each other. A few years ago, the Interstate Highway System changed the face of rural America. By 1985, no doubt another project—railroad reorganization—will have major impacts on country life. Hundreds of miles of branch rail lines are scheduled for abandonment, but new lines are on the drawing boards.

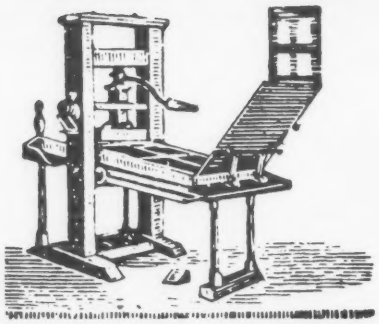
Construction and maintenance of rural highways and bridges, along with the railroad construction, will make their marks on rural economies. It's not clear what the marks will look like, but they'll be unmistakable. One area to watch: changes in interregional competition within the food and agriculture complex.

The squeeze of inflation. Farmers will also have to deal with inflation. It's caused a lot of their problems in the past, and may cause more in the future. Whether from the cost-price squeeze, the wage-price spiral, or any of the other maladies that go with the inflation disease, farmers will be affected both domestically and in the international food and fiber markets.

Keeping track of the forces that shape the future is a tough assignment. To help farmers and other people in the food and agricultural complex cope, ERS has formed the Economics Projection Program, to research and handle the information in a form farmers can use.

[Based on "The Future of Food and Agriculture: Issues," summarized from *ERS Forward Look: Emerging Issues and Research Implications*, by Leroy Quance, National Economic Analysis Division, and Gary C. Taylor, Assistant Deputy Administrator, ERS.]

Recent Publications



CITRUS, Continued from p. 19
that are larger than those of 20 years ago. According to the 1974 Census of Agriculture, more than 8,000 orange groves operate in Florida, which has three-quarters of U.S. orange production. Of these, nearly 6,900 are family operated, with an average 49 acres per farm. Corporate farms in Florida number nearly 1,000, but they average about 500 acres each, operating nearly one-half million acres of Florida orange groves—50 percent more than the acreage of all family-operated groves.

The large groves help to supply an uncertain demand. Demand depends, perhaps more than for many other crops, on the rest of the Nation's economy. Fruits are often considered an "extra" and don't find their way from market to home as frequently when the economy is slipping. Consumption of citrus has been found to vary almost directly with the national economic health, and with supply. The greater the supply and the healthier the economy, the greater the consumption of citrus.

Shipping citrus. Growers also look to the foreign market for sales. The U.S. is the leading producer of citrus in the world, but its share of the world market has slipped in recent years from 90 to 75 percent of the total traded. The reduction comes because of increased foreign production, particularly from Mediterranean and South American countries. Competition in the world market is expected to be keen in future years.

But the four citrus States—Florida, California, Texas, and Arizona—are expected to increase production to meet demand and marketplace competition.

[Based on *The Fruit Situation*, compiled by Jules V. Powell and Ben W. Huang, Commodity Economics Division, with special material from Jules V. Powell.]

Single copies of the publications listed here are available free from Farm Index, *Economic Research Service, Rm. 1664-So., U.S. Department of Agriculture, Washington, D.C. 20250. However, publications indicated by (*) may be obtained only by writing to the experiment station or university. For addresses, see July and December issues of* Farm Index.

Factors in the Decline of the Western Sheep Industry. C. Kerry Gee, Richard S. Magleby, and Darwin B. Nielsen, Natural Resource Economics Division. AER-377.

The number of sheep producers in the U.S. is declining at a rapid pace. Former producers in Colorado, Texas, Utah, and Wyoming—among the largest sheep-producing States—were surveyed as to why they got out of the business, and what they're doing now. About half of them are still in agriculture in some form, and many list high predation losses, low prices, a labor shortage, and their own age as reasons for quitting the sheep business.

People's Republic of China Agricultural Situation. Review of 1976 and Outlook for 1977. Centrally-Planned Countries Program Area, Foreign Demand and Competition Division. FAER-137.

PRC agricultural production was disappointing during 1976, and this report finds the outlook for 1977 uncertain because of adverse weather in winter 1976 and spring 1977.

Summary of Food Purchases and Prices—Griffin, Georgia, April-June 1976, With Previous Periods. Robert Rauniker, Department of Agricultural Economics, Georgia State Experiment Station, Experiment, Georgia 30212. Research Report 252.

Since January 1975, a panel of households in Griffin, Georgia has continuously reported weekly food purchases. This report, the third in a series, summarizes the food purchases of the 86 households during the April-June 1976 period.

Changes in Farm Production and Efficiency, 1977. Donald D. Durost and Evelyn T. Black, National Economic Analysis Division. Stat. Bul.-581.

U.S. farm output in 1976 rose 3 percent above the 1975 record, and the use of inputs increased only 1 percent. This happened even though the Nation was plagued by high temperatures and dry soils for most crops. This report details changes in cropland use, yields, and input changes, along with other pertinent production facts.

Analyzing the Feasibility of Rural Rental Apartments in the Great Plains: A Guide for Local Decisionmakers. Joseph R. Schmidt and Gerald A. Doeksen, Economic Development Division, with Jack Frye, Extension Service, and John C. Maxey, Farmers Home Administration. Ag. Inf. Bul.-397.

A budget analysis is presented to aid in evaluation of proposed rental apartments in rural areas. Average costs for varying types of rental units are discussed.

Economic Trends

[1] Ratio of index of prices received by farmers to index of prices paid, interest, taxes, and farm wage rates. [2] Average annual quantities of farm food products purchased by urban wage earner and clericalworker households (including those of single workers living alone) in 1959-61—estimated monthly. [3] Annual and quarterly data are on 50-State basis. [4] Annual rates seasonally adjusted third quarter. [5] Seasonally adjusted. [6] As of March 1, 1967. [7] As of February 1, 1976. [8] As of Novmember 1, 1976. [9] As of November 1, 1977.

Source: U.S. Dept. of Agriculture (Agricultural Prices, Foreign Agricultural Trade and Farm Real Estate Market Developments); U.S. Dept. of Commerce (Current Industrial Reports, Business News Reports, Monthly Retail Trade Report and Survey of Current Business); and U.S. Dept. of Labor (The Labor Force and Wholesale and Consumer Price Index).

ITEM	UNIT OR BASE PERIOD	1967	1976			1977	
			YEAR	Oct.	Aug.	Sept.	Oct.
Prices:							
Prices received by farmers	1967=100	—	186	178	175	174	178
Crops	1967=100	—	197	195	173	171	178
Livestock and products	1967=100	—	177	165	177	177	177
Prices paid, interest, taxes and wage rates	1967=100	—	192	192	202	201	201
Prices paid (living and production)	1967=100	—	188	188	196	196	196
Production items	1967=100	—	193	192	199	197	198
Ratio [1]	1967=100	—	97	93	87	87	89
Wholesale prices, all commodities	1967=100	—	183.1	185.3	194.6	195.3	196.3
Industrial commodities	1967=100	—	182.4	186.3	196.9	197.8	199.1
Farm products	1967=100	—	191.0	188.2	181.2	181.9	182.4
Processed foods and feeds	1967=100	—	178.0	174.9	185.1	184.2	184.5
Consumer price index, all items	1967=100	—	170.5	173.3	183.3	184.0	184.5
Food	1967=100	—	180.8	181.6	195.2	194.5	194.4
Farm Food Market Basket: [2]							
Retail cost	1967=100	—	175.4	174.4	180.8	179.7	179.2
Farm value	1967 =100	—	178.8	168.7	180.7	178.0	178.5
Farm-retail spread	1967=100	—	173.2	178.0	180.9	180.8	179.7
Farmers' share of retail cost	Percent	—	40	38	39	38	39
Farm Income: [3]							
Volume of farm marketings	1967=100	—	121	170	124	128	167
Cash receipts from farm marketings	Million dollars	42,817	94,326	10,756	7,673	8,034	10,000
Crops	Million dollars	18,434	47,937	6,621	3,664	3,938	5,600
Livestock and products	Million dollars	24,383	46,389	4,135	3,961	4,008	4,400
Realized gross income [4]	Billion dollars	49.9	103.6	—	—	98.7	—
Farm production expenses [4]	Billion dollars	38.2	81.7	—	—	82.5	—
Realized net income [4]	Billion dollars	11.7	21.9	—	—	16.2	—
Agricultural Trade:							
Agricultural exports	Million dollars	6,380	22,996	2,251	1,542	1,734	1,705
Agricultural imports	Million dollars	4,452	10,992	811	1,005	1,016	855
Land Values:							
Average value per acre	Dollars	[6] 168	[7] 388	[8] 427	—	—	[9] 474
Total value of farm real estate	Billion dollars	[6] 182	[7] 394	[8] 433	—	—	[9] 479
Gross National Product: [4]	Billion dollars	796.3	1,706.5	—	—	1,914.9	—
Consumption	Billion dollars	490.4	1,094.0	—	—	1,216.9	—
Investment	Billion dollars	120.8	243.3	—	—	302.3	—
Government expenditures	Billion dollars	180.2	361.4	—	—	403.3	—
Net exports	Billion dollars	4.9	7.8	—	—	-7.6	—
Income and Spending: [5]							
Personal income, annual rate	Billion dollars	626.6	1,382.7	1,414.2	1,548.2	1,560.6	1,580.9
Total retail sales, monthly rate	Million dollars	24,413	53,542	54,171	59,020	58,993	60,047
Retail sales of food group, monthly rate	Million dollars	5,781	12,162	12,266	13,005	13,100	13,213
Employment and Wages: [5]							
Total civilian employment	Millions	74.4	87.5	87.7	90.8	91.1	91.2
Agricultural	Millions	3.8	3.3	3.3	3.3	3.2	3.3
Rate of unemployment	Percent	3.8	7.7	7.9	7.1	6.9	7.0
Workweek in manufacturing	Hours	40.6	40.0	39.9	40.3	40.2	40.3
Hourly earnings in manufacturing, unadjusted	Dollars	2.83	5.19	5.29	5.69	5.72	5.79
Industrial Production: [5]	1967=100	—	129.8	130.2	138.2	138.7	139.1
Manufacturers' Shipments and Inventories: [5]							
Total shipments, monthly rate	Million dollars	46,487	98,168	97,043	111,376	111,921	112,745
Total inventories, book value end of month	Million dollars	84,527	166,587	166,674	175,104	176,164	176,829
Total new orders, monthly rate	Million dollars	47,062	98,497	99,006	111,494	112,441	116,303

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